

TPO Design requirements

- 1- Must meet or exceed ASTM D 6878-03
- 2- 10-year minimum performance history on membrane.
- 3- Membrane must be manufactured with non-wicking scrim.
- 4- Only balanced sheets will be acceptable. Scrim must be in center of membrane with no less than 20 mils polymer above scrim.
- 5- 60 mil (57mil minimum) polymer thickness not over all thickness.
- 6- Polyolefin must be reactor grade or molecular bonded, no mechanical grade polyolefin membranes will be allowed.
- 7- Heat Aging (ASTM D 573) must be tested and pass 28 days @ 240 f. with less than 1% dimensional change.
- 8- Resistance to xenon-arc weathering (ASTM G 155) must be tested and pass a minimum of 17,640 kJ/m² or 14,000 hours at an irradiance of 0.35 W/m²
- 9- Low temperature flexibility must be tested using the dynamic impact test (ASTM D 2137) and pass at no more than 35 degrees F. below zero.
- 10- Minimum Warranty period should be 20 years on appropriate DFCM roofing Warranty.
- 11- Minimum Contractor workmanship Warranty period should be 5 years on DFCM contractor Warranty.
- 12- A DFCM history record is required on all roofing systems.
- 13- Roof slope of ¼" is required on all roof systems. Slope should be built into structure on new buildings and added with insulation on re-roof applications. Insulation should always be installed in two layers minimum unless a recovery board is all that is required.
- 14- Minimum flashing height requirements are 8" for all mechanical, skylights, wall flashings or any other item that extends above the roof line. This is a minimum flashing height, windows or other such items should be well above 8" above the roof line.
- 15- All mechanical equipment is required to be set on roof deck. No equipment should sit on insulation.
- 16- Standing seam joints are required on all copings. All cap metal should be attached with a continuous clip on the front side and fasteners 16" minimum on back side.
- 17- Only Mechanically fastened or fully adhered systems should be used. No ballasted systems will be allowed.
- 18- No concrete walkway pads are allowed on roof system.
- 19- All metal (copings, counter flashings and edge metal) associated with roof system should be a minimum of 24 gauge and color clad.
- 20- Pre-manufactured accessories are required for all pipe flashings, inside and outside corners and any other location pre-manufactured accessories are available.

- 21- All material and details should meet the requirements of NRCA, SMACNA, UL and FM.
- 22- The DFCM Roofing program manager should review and approve any variance from that listed above.